

Name..... Comb.....

P530/1

BIOLOGY

(Theory)

Paper1

March. 2025

1½hours

Uganda Advanced Certificate of Education

S.5 Welcome Test

BIOLOGY

Paper 1

1 hour 30 minutes

INSTRUCTIONS:

Attempt all questions

Write answers to the questions in the spaces provided.

No addition sheet of paper should be used

SECTION A (40 scores)

1. During a biology lesson, the teacher prepared slides of thin slice of a black jack stem, slice of Irish potato and epidermis of onion leaf which students observed under a microscope. Many students said that they saw parenchyma tissue while others were confused about the type of tissue they had observed.

Task

- (a) Identify the tissues the students are likely to have observed. (03 scores)

.....

.....

.....

.....

(b) Describe the structure of a typical parenchyma cell. (03 scores)

.....
.....
.....
.....

(c) Explain the importance of the parenchyma tissue observed by the student to the plant. (04 scores)

.....
.....
.....
.....
.....
.....
.....
.....

2. James is a 45-year old man who recently started a routine health-up. His doctor informed him that his blood test showed elevated levels of fats and cholesterol. The doctor advised him to make a dietary and life style changes to manage his lipid profile.

(a) Based on jame's lipid profile, what potential risks might he face if no changes are made? (02 scores)

.....
.....
.....

(b) As a student who has studied chemicals of life, explain how lipids are formed in james' body. (04 scores)

.....
.....
.....
.....
.....
.....
.....
.....

(c) How are lipids important in Jame's body? (04 scores)

.....

.....

.....

.....

.....

.....

.....

.....

3. (a) What is meant by the term Magnification? (01 score)

.....

.....

.....

.....

(b) During a scientific investigation, each students was given 50µm long specimen. After observing using a microscope One of the students made a drawing of the specimen which was 20mm long. The student got stuck, unable to find the magnification. Calculate the magnification of the drawing. (03 scores)

.....

.....

.....

.....

.....

.....

(c) What is the effect of increasing magnification of a specimen? on the image seen. (02 scores)

.....

.....

.....

(d) Mention the advantages of using a light microscope. (04 scores)

.....

.....

.....

.....

-
.....
4. (a) Distinguish between a cell and a tissue. (02 marks)

-
.....
.....
.....
(b) State the differences that exists between the ultra-structure of a plant and animal cell. (04 marks)

-
.....
.....
.....
(c) How are the following organelles important in a cell?

- (i) cell membrane (02 marks)

-
.....
.....
.....
(ii) mitochondria (01 score)

-
.....
(iii) Golgi body (02 score)

.....
.....

END

